Start Here — The Receipts & The Reality

The full financial case for Britain's energy transition, every figure sourced. It comes in three pieces — the deep-dive Report, the 2-minute Summary, and a guide to rebuild it for your own country. Companion to the book "The World Is Worth Rebuilding." Free to share.

1. The Full Report — "The Receipts: The Real Cost of Britain's Energy Transition"

The complete, sourced case: what we lose now, what the switch really costs, who pays, what's stalling it, and how to fix it. This is the trajectory of the evidence, section by section:

1. Executive summary — the three numbers and the payback
2. Where we are now
3. The cost of staying hooked on fossil fuels
4. The cost of building the clean system
5. The savings over time
6. The whole picture in one place
7. Balancing the books to 2050 — and when it pays us back
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11. Where the money comes from — fairly
12. Build capacity — what's really holding us back
13. What we use gas & oil for — and what to switch
14. Transitioning your home — the practical reality
15. The heat gap — why the grant isn't enough, and how to fund it
16. What we can personally control — home, transport, food
17. Tradeoffs, sacrifices & the 'austerity' question
18. The bottom line
19. Delivery scorecard — are they keeping their promises?

…plus three deep-dive additions — The Finance Gap · Why the Private Money Stalls · Solutions & Proposals — and a full Sources & Method note.

2. The Summary Edition — the TL;DR

The whole argument in about two minutes: the five-line case, the "rent forever vs own it" comparison, the payback table, the delivery scorecard, and what you can do this week. For anyone who wants the headlines fast before deciding to read deeper.

3. How to Build This for Your Own Country (with Claude)

A simple step-by-step to recreate this entire report for your own nation: the prompts to use, the figures to swap in — your country's energy imports, build costs, grants and emissions — and how to check every source. Wherever you are, you can build your own receipts.

From The Receipts & The Reality Project · v1.0, June 2026 · information for public debate, not financial advice · free to share with attribution.

THE RECEIPTS

The Real Cost of Britain's Energy Transition

Current cost vs transition cost vs what we save — balancing the books to 2050 (and faster). A plain-English, fully-sourced financial report.

From **The Receipts & The Reality Project** · Companion to the book *The World Is Worth Rebuilding* (free to everyone).

Version 1.0 · Published June 2026 · UK figures (2024–25 baseline; refresh annually) · Free to share with attribution.

What this report does. It tallies the whole money picture in one place and analyses it together: what we are *already* paying to stay on fossil fuels, what it costs to build the clean system, the full bill balanced to 2050, the year it starts paying us back, what happens if we go twice as fast, where the money comes from, and the real tradeoffs — down to what we burn gas and oil for at home. Every figure is sourced at the end.

Figures are the best current public estimates (UK government/DUKES, the Climate Change Committee, NESO, ONS, independent analysts). Year-by-year and accelerated profiles are illustrative models built on those published averages and milestones, clearly labelled. Information for public debate — not financial advice.

TL;DR — the whole report in 60 seconds

- **What fossil fuels cost us now:** ~£37bn/yr leaves the UK for imported energy; ~£140bn spent on gas since 2021 (~£90bn more than normal). We import ~57% of our gas. (Sec 2–3)
- **The myth, busted:** it's gas — not green energy — that sets high bills; new wind & solar generate at about half the cost of gas, ~8p vs ~15p a unit even after backup. (Sec 4)
- **Where we are:** ~51% renewables, ~74% low-carbon — renewables passed fossil fuels for the first time in 2024. (Sec 2)
- **What switching costs:** ~£40bn/yr to 2030 for clean power (mostly private); whole-economy net zero ~£26bn/yr — a net ~£4bn/yr, under 0.2% of GDP. (Sec 4–6)
- **When it pays us back:** cheaper to run from ~2040, the whole bill repaid by the early 2050s, then a permanent surplus of ~£40bn+/yr. Go twice as fast → payback ~2046. (Sec 7–8)
- **Where the money comes from:** mostly private — much of it our own pensions — invested here in assets we own. The choice is rent forever, or buy and own. (Sec 6, 11)
- **What's holding us back:** not money — building. Grid hardware (2–4yr waits) and too few installers (~8,650 vs ~40,000 needed); planning is largely fixed. (Sec 12)
- **Your home:** ~74% of us heat with gas. Insulate first, then a heat pump (£7,500 grant); older homes need more work but still convert. (Sec 13–14)
- **The heat gap:** ~74% of homes are on gas; the £7,500 grant still leaves a £2,500–£6,500 wall, so uptake is stalling. Fully funding the switch on annual quotas (~£2bn rising to ~£6bn/yr) is the fix. (Sec 15)
- **What YOU control:** home heating + the car/van you drive ≈ **half** of all UK energy; the single biggest lever is your **pension**. If all UK households made the switches, that's ~**a third off the country's 371 Mt of emissions** — from home & transport alone. (Sec 16)
- **Are they delivering? (mid-2026):** planning & grid-queue reform ON TRACK; heat pumps & grid hardware BEHIND — that's where to hold them to account, and where writing to your MP counts most. (Sec 19)
- **Bottom line:** the clean system is cheaper, more secure and ours — and it doesn't just pay for itself, it then generates a permanent surplus of ~£40bn+/yr for the UK economy. The only real questions are how fast we build and how fairly we share the cost.

1 Executive summary — the three numbers and the payback

- **What staying on fossil fuels costs us now: ~£37bn a year leaves the UK** for imported energy (2024 net) — it hit **£100bn+ gross** at the 2022 peak — and we spent ~**£140bn** on wholesale gas in 2021–24, ~**£90bn more than normal**. We re-buy this every year.

- **What the transition costs:** building the clean **power** system is ~**£40bn/yr to 2030** (~£240bn over ~6 years, mostly private). Separately, taking the **whole economy** to net zero by 2050 needs ~**£26bn/yr** on average — which, after ~**£22bn/yr** of fuel-and-running savings, nets to only ~**£4bn/yr (<0.2% of GDP)**.

- **What we save & when it pays back:** the annual books turn to **saving around 2040**; the whole bill is **repaid in the early 2050s**, after which the system runs a **permanent surplus of ~£40bn+/yr**. Every £1 invested returns **£2.2–£4.1**; the typical bill falls toward **~£1,200**.

The honest comparison isn't 'expensive green vs free fossil.' It's RENT FOREVER vs BUY AND OWN.

We already spend transition-sized money every year (~£37bn out of the door) renting an imported, volatile system that leaves us nothing. The transition redirects similar sums — mostly private money, much of it our own pensions — into clean assets we own here, that then pay us back. Same money, opposite outcome.

2 Where we are now

Table 1 — UK electricity generation mix, 2024. Renewables overtook fossil fuels for the first time; the last coal plant closed in September 2024.

Source	Share of generation	Type
Wind	~29%	Renewable
Gas	~26%	Fossil
Bioenergy / biomass	~14%	Counted 'renewable' (contested)
Nuclear	~14%	Low-carbon (not renewable)
Solar	~5%	Renewable
Hydro	~2%	Renewable
Coal	<1% (last plant closed Sep 2024)	Fossil
Renewables — total	**~51% (first year above fossil)**	—
Low-carbon — total	**~74% (renewables + nuclear)**	—
Fossil — total	**~26% (almost all gas)**	—

Sources: Ember; DESNZ DUKES 2025; RenewableUK (2024). Imports (~14% of supply, mostly low-carbon) counted separately.

Table A — Where our fossil fuels come from, and what it costs us. We don't control most of our own supply — so a shock anywhere lands on our bills, and the money leaves the country.

Fuel	Domestic	Imported & from where	What it costs us
Gas	~43% (UK North Sea)	~57% imported: **Norway pipeline ~76% of imports** (~half our total use); LNG ~14% of supply (~68% USA, ~8% Qatar, ~7% Trinidad)	Part of a ~£13bn/yr net gas/coal/electricity deficit; far higher at crisis prices
Oil	~8% of refinery crude is UK	Most crude imported — **USA the largest supplier**; OPEC ~20%. Most UK-produced oil is exported (wrong grade for our refineries)	~£24.3bn/yr net oil-import deficit (2024)
TOTAL energy imports	—	Net importer of both gas and oil	**~£37bn/yr leaves the UK (2024 net); ~£100bn+ gross at 2022 peak**

Sources: DESNZ DUKES 2025; ONS energy trade; Statista; Energy Voice. UK oil output (31 Mt, 2024) was the lowest on record; ~90% of recoverable North Sea reserves already drained (ECIU).

3 The cost of staying hooked on fossil fuels

The recurring bill (your 'Norway and America' question). Because we import ~57% of our gas and most refinery oil, tens of billions leave the UK every year. In 2024 the **net** energy trade deficit was ~**£37bn** (oil ~£24.3bn + gas/coal/electricity ~£13bn); at the 2022 peak gross imports topped **£100bn** (oil ~£63bn, gas ~£49bn). Norway is our dominant gas supplier and the USA our biggest oil/LNG supplier — so their prices are *our* prices. This is money spent and gone, every year. (ONS; DUKES; Energy Voice)

The crisis bill. Since 2021 the UK spent ~**£140bn** on wholesale gas — ~**£90bn more** than normal (~£2,000/person). Households alone paid an extra **£59bn** on gas, electricity and road fuel. The whole crisis cost **more than NHS England's annual budget**. (ECIU; E3G)

The clean-up bill — mostly not ours. Most of our fuel is produced abroad, so most decommissioning sits with other countries. Cleaning up the North Sea is paid *whether or not we switch* (the fields are running dry) — a legacy cost of having used fossil fuels, not of leaving them.

Fossil asset	Who pays	Estimated cost	Notes
UK North Sea oil & gas	UK operators + taxpayer (tax relief)	**£45–77bn**; taxpayer **~£24bn**	Paid anyway as fields deplete (~90% drained). ~£2.1bn last year → ~£3bn/yr by 2028.
Imported gas (Norway, LNG)	Exporting nations	Not on UK's books	We pay the annual import bill instead.
Imported crude oil	Exporting nations	Not on UK's books	UK refineries run mostly on imported crude.
UK gas / coal stations	Operators / done	Modest / done	Coal ended Sep 2024; gas plants retire over time.

The real lesson: our biggest fossil cost isn't the one-off clean-up (~£45–77bn) — it's the **recurring ~£37bn/yr** for imported fuel. That's the bill the transition ends. (NSTA; NAO)

4 The cost of building the clean system

Table 2 — The total cost picture. Note the two investment figures are *different scopes* — power-only to 2030, and whole-economy to 2050 — and should not be added together.

Item	Figure	Notes / source
Decommission old fossil (North Sea)	£45–77bn (taxpayer ~£24bn)	Paid anyway as fields deplete (NSTA / NAO)

Item	Figure	Notes / source
Build clean ELECTRICITY (95% clean by 2030)	~£40bn/yr to 2030 (~6 yrs, ~£240bn): £30bn generation + £10bn grid	Power sector only; mostly private (Gov.uk Clean Power 2030)
WHOLE-economy net zero (to 2050)	~£26bn/yr average investment	Includes heating, transport, industry, buildings (CCC)
Annual running cost	Low — no fuel cost; ~£10–12/MWh (~1p/unit) to integrate wind	vs gas, where fuel is bought forever (UKERC)
NET cost after savings (whole economy)	**~£4bn/yr avg 2025–2050 (<0.2% GDP) = ~£108bn total**	£26bn investment minus ~£22bn/yr operating savings (CCC)

What a unit of power costs to build: new onshore wind ~7p, solar under 7p, vs ~15p for new gas — for identical electricity. Add the full cost of backing up renewables (~1p/unit, UKERC) and wind is still ~8p vs gas ~15p — and the gas figure leaves out its own hidden costs (volatility, carbon). (Carbon Brief; UKERC)

What we've already done:

- Renewables reached **~51%** of generation in 2024 — past fossil for the first time; coal power ended.
- The latest auction (AR7) was the **biggest ever** — ~14.7GW of new renewables (record 8.4GW offshore wind).
- The grid queue (ballooned to **~700GW**) is being cleared: **283GW** prioritised; a **132GW** shovel-ready pipeline to 2030; reforms could unlock **~£40bn/yr**.

5 The savings over time

Phase	Roughly when	What happens to the money
Heavy build-out	2026 – early 2030s	Upfront investment highest; net cost positive.
Crossover	~2040	Fuel savings overtake investment → net zero becomes a NET SAVING.
Maintenance phase	by 2050	System ~£40bn/yr cheaper; households ~£700/yr better off (+~£1,000 from halved energy losses); no world-priced fuel bills.
Lifetime	2025–2050	Benefits ~£110bn/yr avg; net present value ~£1,580bn; every £1 returns £2.2–£4.1.

For a household bill: the National Infrastructure Commission expects the typical dual-fuel bill to fall from just under **£2,000/yr (2019)** to ~**£1,300 by 2035** and **under £1,200 by 2050** — because we stop paying for volatile gas. (CCC; NIC)

6 The whole picture in one place

	STAYING on fossil fuels	BUILDING the clean system
Money each year	~£37bn/yr leaves the UK (2024 net); £100bn+ gross in 2022; £140bn excess gas 2021–24	~£40bn/yr to 2030 (power); ~£26bn/yr to 2050 (whole economy)
One-off or recurring?	**Recurring forever** — re-bought every year, price not ours to set	**Mostly upfront** — build once, then cheap to run (no fuel)
Who pays & where it goes	Bill-payers & taxpayers; money largely **leaves the country**	Mostly private (65–90%), incl. our pensions; **stays and works in the UK**
By 2050	Keeps rising with every global shock	~£40bn/yr **cheaper**; bills ~£1,200; £2.2–£4.1 back per £1

Read together: we're *already* spending transition-sized sums every year on a system that gives us nothing lasting. The transition redirects comparable money into clean assets we own. The real choice is **rent forever, or buy and own.**

7 Balancing the books to 2050 — and when it pays us back

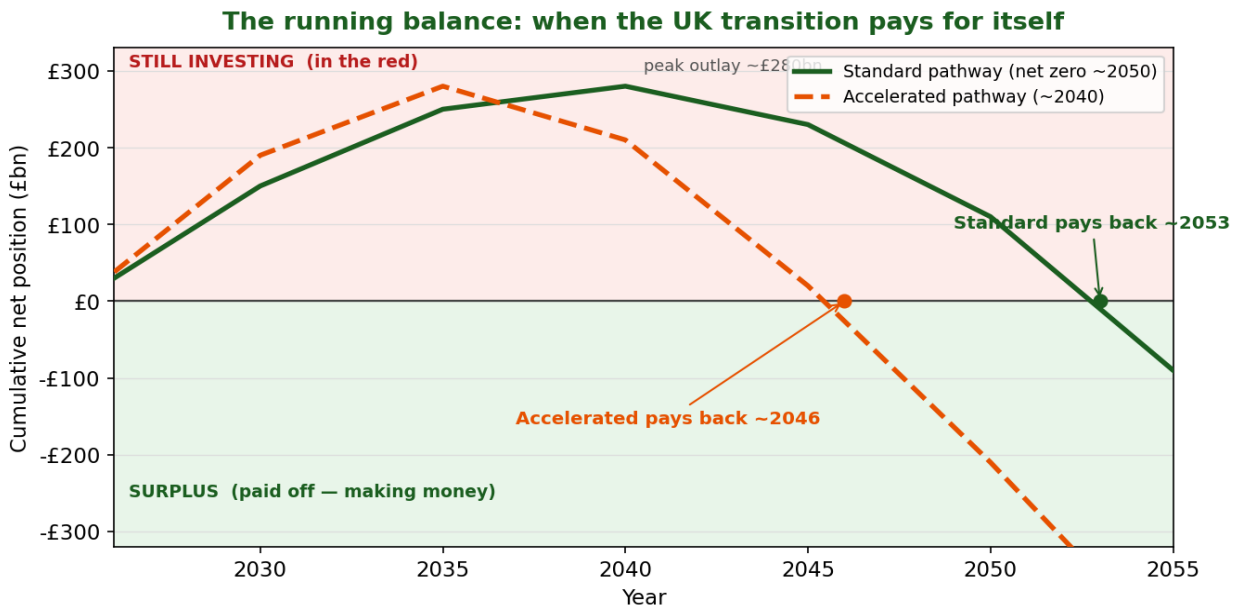
Here is the whole bill as a running balance: each period's investment, the savings it generates, the net, and the cumulative position. Most of this money is invested **inside our borders** (much of it our own pensions) and builds assets **we own** — unlike the fossil bill, which mostly leaves the country.

> **Important — what kind of numbers these are.**
> The Climate Change Committee publishes the AVERAGES and milestones (~£26bn/yr invested, ~£22bn/yr saved, net saving from ~2040, ~£40bn/yr cheaper by 2050). The year-by-year shape below is a transparent ILLUSTRATIVE profile built to honour those anchors — directionally right, not an official year-by-year forecast.

Table 4 — The UK transition balance sheet (illustrative, 5-year increments). Net: cost = +, saving = –.

Period	Investment /yr	Savings /yr	Net /yr	Running balance
2026–2030	£36bn	£6bn	**+£30bn** (cost)	£150bn
2031–2035	£31bn	£11bn	**+£20bn** (cost)	£250bn
2036–2040	£26bn	£20bn	**+£6bn** (cost)	**£280bn (peak)**
2041–2045	£21bn	£31bn	–**£10bn** (saving)	£230bn
2046–2050	£16bn	£40bn	–**£24bn** (saving)	£110bn
2051–2053	~£10bn	~£50bn	–**£40bn** (saving)	**£0 — PAID OFF ~2053**

Over 2026–2050: ~**£650bn gross invested**, offset by ~**£540bn saved** = ~**£110bn net** (≈ the CCC's £108bn). The cumulative bill **peaks ~£280bn around 2040**, then the savings pay it down.



Illustrative profile built on Climate Change Committee unit-economics (avg ~£26bn/yr invested, ~£22bn/yr saved; net saving from ~2040). Not a CCC forecast.

Figure 1 — The running balance. The line climbs while we build, then falls as savings take over, crossing zero when the whole bill is repaid. Standard pathway pays back ~2053; the accelerated pathway (Section 8) ~2046.

When does it start MAKING us money?

Three milestones: (1) the ANNUAL books turn to saving ~2040 — from then on, each year the clean system is cheaper to run than the fossil one. (2) The WHOLE bill is repaid in the early 2050s (~2053) — the cumulative investment, including running costs, has been fully paid back by accumulated savings; load all North Sea decommissioning onto it too and it's ~2054. (3) After that it runs a PERMANENT SURPLUS of ~£40bn+/yr. Maintenance is already covered — renewables are cheap to run, and that running cost is netted inside the savings figure. In short: cheaper to run from ~2040, fully paid off by the early 2050s, pure surplus thereafter.

And the 'do nothing' bill: keep importing energy at ~£37bn/yr and that's ~**£900bn+ out of the economy by 2050** — gone, owning nothing, and higher in every crisis — plus the £45–77bn decommissioning we owe anyway. So the real balance sheet is **~£110bn net (invested at home, in assets we own, that pay us back) versus ~£900bn+ sent abroad for fuel, gone forever.**

8 Going faster — halving the timeframe

2050 is where most plans aim, but the unit economics don't *require* that date. What if we compressed the build to reach net zero around **2040** instead? You invest harder and earlier, but the savings — and the payback — arrive much sooner.

How to read this section.

This accelerated pathway is illustrative project modelling using the CCC's unit-economics, extrapolated to a faster build. It is NOT a CCC forecast. Crucially, the limit on going faster is not money (the capital is available) — it is BUILD CAPACITY: grid connections, planning, supply chains and skilled workers. Going fast may also carry a short-term unit-cost premium as supply chains stretch.

Table 5 — Accelerated balance sheet (illustrative, ~net zero by 2040).

Period	Investment /yr	Savings /yr	Net /yr	Running balance
2026–2030	£48bn	£10bn	**+£38bn** (cost)	£190bn
2031–2035	£44bn	£26bn	**+£18bn** (cost)	**£280bn (peak)**
2036–2040	£30bn	£44bn	–**£14bn** (saving)	£210bn
2041–2045	£14bn	£52bn	–**£38bn** (saving)	£20bn
2046–2050	£10bn	£56bn	–**£46bn** (saving)	–**£210bn (SURPLUS)**

Table 6 — Standard vs Accelerated, side by side.

Measure	Standard (~2050)	Accelerated (~2040)
Annual books turn to saving	~2040	~2037
Peak cumulative outlay	~£280bn (~2040)	~£280bn (~2035)
Full payback (into surplus)	~2053	**~2046 (7 years sooner)**
Position by 2050	~£110bn net cost (repaid soon after)	**~£210bn in surplus**
Gross invested 2026–50	~£650bn	~£730bn (going fast costs a bit more)
Extra prize	—	~10 fewer years of ~£37bn/yr imports ≈ **~£370bn kept at home** + earlier climate safety

The verdict: going faster costs more up front (~£730bn vs ~£650bn gross) but is **financially superior over the lifetime** — it pays back ~7 years sooner and leaves the country ~£210bn in surplus by 2050 instead of ~£110bn still to recoup, while avoiding ~£370bn of import outflow. The constraint is how fast we can physically build and train, not whether we can afford it.

→ **Write to your MP:** going faster is a political decision, not a financial one. Tell them you want the accelerated pace — and the investment to match.

9 Cost / benefit — the honest pros and cons

Benefits / pros	Costs / risks / cons
• Cheaper power over time — wind/solar the cheapest electricity ever built. • **Energy security** — can't be held to ransom by a foreign war or pipeline. • Lower, more **stable** bills (~£1,200 by 2050). • Cleaner air, health savings. • Hundreds of thousands of jobs. • **£2.2–£4.1 back per £1**. • Ends the ~£37bn/yr import drain; money stays home. • Cuts carbon.	• **High upfront investment** in the 2020s–30s. • Short-term bills can rise before they fall. • Intermittency needs storage + grid (~1p/unit). • **Delivery risk**: grid queue, planning, supply chains. • **Just transition** needed for oil & gas workers. • Dependence shifts to **critical minerals**. • New nuclear is expensive and slow. • If costs land unfairly, they hit the poorest hardest.

10 How fast we need to go vs how fast we're going

Targets: 95% clean electricity by 2030; ~87% emissions cut by 2040; net zero by 2050 (legally binding).
Now: ~51% renewables / ~74% low-carbon, queue being cleared, record pipeline. Real, but tight.

Trajectory	~95% clean by 2030?	What it depends on
Fast / on-plan	Yes	Grid & planning reforms land on time; supply chains & workforce scale; capital deploys fast.
Current realistic	Close — possibly a few years late	Reforms underway (283GW prioritised) but grid build is the binding constraint.
Slow / stalled	No	If planning, grid or political will slip — or money is tied up in slow, costly new nuclear.

The bottleneck is not money — it's building: grid connections, planning, supply chains, skilled workers. That's where reform is aimed. (NESO; Gov.uk)

11 Where the money comes from — fairly

Most of the ~£40bn/yr is **private** — the CCC expects 65–90% private funding. The biggest single pool is **our own pensions**.

- **Pensions:** ~**£1.7 trillion** in UK workplace pensions seeks steady long-term returns — clean infrastructure is exactly that. Yet pensions still hold ~**£88bn in fossil fuels** (~£3,000/saver). Moving it is the biggest lever ordinary people have.
- **Public co-investment:** Great British Energy and the National Wealth Fund invest alongside private money and take early risk.
- **De-risking:** the Contracts-for-Difference auction guarantees a price, so private capital floods in once the rules are set.

Keeping it fair (so it isn't austerity by another name): rebalance levies **off electricity onto gas** so green is cheaper not dearer; a **social tariff** for low-income homes; and **community ownership** so profits stay

local. (CCC; UKERC; Frontier Economics)

12 Build capacity — what's really holding us back

The money for this transition exists (Section 11). What sets the real pace is **physical**: the grid, the workforce, the supply chain and planning. Here's the honest state of each.

1. Grid hardware — the single biggest constraint. Connecting clean power needs transformers and cables, and the whole world is queuing for them. Procurement now takes **2–3 years for cables and up to 4 years for large transformers** (double 2021); high-voltage DC cables can be **5 years+**. Cable costs have **roughly doubled since 2019**, transformer prices are up **~75%**, and the global backlog isn't expected to ease before 2027. (IEA)

2. The grid queue — reformed, now it must be built. The connection queue had ballooned to **700GW+** (~4x what we need); NESO has cut it to a prioritised **283GW** pipeline (Dec 2025) — but only ~**13GW of demand can connect before 2030**. The reform is done; the build is the test. (NESO)

3. Workforce — a fivefold gap on heat. The Warm Homes Plan implies **~40,000 heat-pump installers**; there are only about **8,650 trained today**. Just **5 in 10** UK heating installers are qualified for heat pumps (vs 8 in 10 in Germany), and the gas workforce is ageing. Offshore wind and the grid need tens of thousands more skilled workers too (~211,000 offshore energy jobs projected by 2030). (Aldersgate Group; Energy UK; OEUK)

4. Planning — largely fixed (a genuine win). The **Planning & Infrastructure Act** received Royal Assent in **December 2025**; **onshore wind was reinstated** to the national infrastructure regime (ending the de-facto ban), and from **2027 new homes in England must include solar** by default. (Gov.uk; reNews)

5. Supply chain — early action underway. Great British Energy's **£300m** (within a £1bn) **Supply-Chain Fund** targets the exact gaps — blades, turbines, transmission cables, converter stations — with drawdown from 2026 to 2030. (GB Energy)

The takeaway: none of this is about whether we can afford it — it's about training people and making or importing kit fast enough. That's where focus, investment and public pressure actually move the timeline.

→ **Write to your MP:** these bottlenecks are political choices. Ask them to back faster grid build-out, UK manufacturing of transformers and cables, and a national push to train heat-pump installers.

13 What we use gas & oil for — and what to switch

A green *electricity* tariff only covers your electricity. Most of us still burn fossil fuel *directly* at home — that's the bit that needs switching.

- **Gas:** ~**74% of UK homes** heat with mains gas (2021 Census); ~**85%** still run a fossil-fuel boiler (2024). Used mainly for **heating, hot water and cooking**.

- **Oil: ~3.5% of homes** heat with oil — part of ~**4 million homes (~15%)** off the gas grid (oil, LPG, biomass), mostly rural. Oil is also **petrol & diesel** and the feedstock for **plastics & chemicals**.

> **Your question: how is Octopus '100% renewable' when it sends gas to my home?**
> Because '100% renewable' refers to your ELECTRICITY only — not your gas. Octopus matches every unit of electricity you use with a renewable certificate (a REGO); it self-generates ~20% and covers the rest with certificates and contracts from 700+ UK generators. But the gas in your boiler and hob is still fossil gas — there is no '100% renewable gas' at scale. 'Green gas' (biomethane) is scarce (~6–25% on the few green-gas tariffs) and the rest is usually carbon-offset, not actually renewable. So a green electricity tariff is great for your power, but it does NOT decarbonise the gas you burn. The only way to do that is to use less gas — or none.

Where to switch, in order of impact:

- **Heating (biggest):** insulate first, then replace a gas/oil boiler with a **heat pump** — grants £7,500 (up to £9,000 for off-grid oil homes).
- **Cooking:** swap a gas hob for **induction**.
- **Transport: EV, e-bike, walking or public transport** instead of petrol/diesel where you can.
- **Electricity:** a genuine **100% renewable tariff** (covers power — not gas).
- **Be realistic:** heat pumps and insulation cost money upfront and aren't possible for everyone yet — which is why grants, the Warm Homes Plan, and a fairer rollout matter. Start where you can.

14 Transitioning your home — the practical reality

With ~74% of homes on gas, the second front is switching homes off fossil heat. Here's the honest how-to — what to do, in what order, what it costs, what help exists, and why older homes are harder.

The order of operations (do it in this sequence):

- **1. Insulate first.** Loft, cavity walls, draught-proofing — the cheapest win. Going from poorly to well-insulated typically costs **£1,000–£3,000**, cuts heat demand **30–40%**, and lets you fit a smaller, cheaper heat pump.
- **2. Get a heat-loss survey** from an **MCS-certified installer** (needed to claim the grant).
- **3. Fit a heat pump** and claim the **£7,500 Boiler Upgrade Scheme** grant (England & Wales; Scotland has Home Energy Scotland grants and interest-free loans).
- **4. Then the rest:** swap a gas hob for **induction**; consider **solar + battery**; switch petrol/diesel for an **EV, e-bike or public transport**.

What a heat pump costs (with the grant):

Home type	Heat pump (before grant)	After £7,500 grant
Flat / small terrace	~£8,000	~£500
3-bed semi	~£10,000	~£2,500
4-bed detached	£11,000–£16,000	£3,500–£8,500

(Plus insulation where needed — cavity is cheap; solid-wall is the big cost, below.)

Why old buildings are harder. The UK has ~**4.5 million solid-wall homes** (mostly pre-1920s). They lose more heat, so they need **more insulation** (solid-wall insulation runs **£8,000–£18,000**) and a **bigger heat pump** — a draughty 1930s home might need a 14kW unit where an insulated one needs 8kW, pushing cost up **30–40%**. Listed or conservation-area homes may need **planning consent** for external insulation, new windows or a visible heat pump. But period homes **do** work with heat pumps once they're insulated enough to run at a low flow temperature. (Recently eased: you no longer need an EPC free of outstanding insulation recommendations to claim the grant.)

Grants & help available (2026):

Scheme	What it gives	Who
Boiler Upgrade Scheme	£7,500 off a heat pump	Any homeowner — England & Wales
Warm Homes Plan	Up to £30,000 for a package (insulation + heat pump)	Income <£36k & EPC D or below, or in a deprived area
ECO / GBIS	Insulation & efficiency help	Lower-income / vulnerable households
Home Energy Scotland	Grants + interest-free loans	Scotland

What's holding people back (the honest bit): upfront cost and disruption; finding a trusted installer (there aren't enough yet — see Section 12); misinformation that heat pumps 'don't work in old homes'; and the fact that **renters and leaseholders often can't choose**. So it isn't possible for everyone right now — which is exactly why the grants, the Warm Homes Plan and a faster, fairer rollout matter. Do what you can, in order; if you rent, push your landlord and your MP. (Ofgem; Gov.uk; Census)

15 The heat gap — why the grant isn't enough, and how to fund the switch

We have **two big bills** to clear, not one: (1) building clean **power** and decommissioning the old system (Sections 4–8), and (2) getting our **homes off gas**. The second is where ordinary households actually feel the cost — and it's badly underfunded. With ~**25 million homes on gas** and ~**2 million on oil** (≈74% of us on gas), this is the front line, and right now it's stalling.

The barrier you've spotted. A heat pump typically costs **£10,000–£14,000** installed. The £7,500 grant is real and welcome — but it still leaves most households finding **£2,500–£6,500 up front**, before any

insulation. For families already at breaking point, that gap is a wall — and it shows: installs are running at only ~**125,000 a year** and growth is *slowing*, against a target of **450,000–600,000**. The National Audit Office warns low uptake is slowing the whole plan. (NAO; HEM)

What the grant covers — and what it doesn't:

- **Covers:** £7,500 off an air/ground/water-source heat pump — for any eligible homeowner in England & Wales, and it is **not means-tested** (earn £20k or £200k, you still get it).
- **Doesn't cover:** the remaining **£2,500–£6,500** of the heat pump; **insulation** (£1,000–£3,000, or £8,000–£18,000 for solid walls); and anything for **renters or leaseholders** who can't choose. For most households, that leftover is the deal-breaker.

The grant, and the gap to what's needed. The Boiler Upgrade Scheme is **not means-tested** (any eligible homeowner in England & Wales can claim £7,500) and is funded to 2029/30 with £2.7bn — but at ~£295m a year it only stretches to roughly **75,000 grants a year**. The wider **Warm Homes Plan is £13.2bn** (£15bn with the Budget top-up) to upgrade 5 million homes by 2030, ~£5bn aimed at low-income homes. Yet the Climate Change Committee estimates we need ~**£162 billion** of investment by 2050 to put low-carbon heating in existing homes — about **£6.5bn a year**. Today's commitment is closer to **£2–3bn a year** — **only about half of what's actually needed**. *That* is the gap, and it is the true crux of the whole transition. (Gov.uk; Ofgem; CCC)

The argument — fully fund the switch, on rising annual quotas. If a £2,500–£6,500 gap is what's stalling people, the fastest way to move households, the market *and* the supply chain is to close it — fully funding the heat pump for a guaranteed, rising quota of homes each year. Full funding removes the upfront wall; a guaranteed quota gives installers and manufacturers the certainty to train and scale (fixing the workforce/supply bottlenecks in Section 12). An illustrative ramp:

Annual quota (fully funded)	Homes/yr	Approx cost/yr (at ~£13,000)
Year-one ramp	~150,000	~£2bn
Mid ramp	~300,000	~£4bn
Full rate (CCC pace)	~450,000	~£6bn

How quickly could it go? Money is not the limiting factor — **installers are** (Section 12). Full funding, paired with a national training push, could lift us to the **450,000–600,000 homes a year** target this decade, then ramp toward ~**1 million a year** to convert most of the country's homes across the 2030s and 2040s. The quota itself *creates* the certainty that makes installers and manufacturers invest in scaling up.

Put the cost in perspective — this is the whole point.

Fully funding every heat pump at the pace we need is about £6.5bn a year. We already send ~£37bn a year ABROAD for fossil fuels — and spent ~£140bn on gas since 2021. So fully funding the nation's switch to clean heat would cost less than a FIFTH of what we already hand to overseas energy markets every year. We are not short of the money. We are spending it on the wrong thing — and only committing about half of even the smaller heat budget we need.

Where the money could come from (it's a choice, not an impossibility): redirect the tax reliefs and subsidies still flowing to fossil fuels — taxpayers already cover ~£24bn of North Sea decommissioning via tax relief; a windfall levy on energy profits; and the savings as the ~£37bn/yr import bill falls. This is illustrative — a policy case, not a costed government plan — but it shows the scale is well within reach.

The honest heart of it: both bills are real and both pay back — but if we don't make the heat switch **tangible and affordable** for ordinary people who are already stretched, that is what truly stalls the whole transition. Fund it properly and you move the people, the market and the supply all at once.

→ **Write to your MP:** ask them to close the heat-pump gap — fully fund the switch through rising annual quotas — and tell them why it matters to you. This is the single change that would move households fastest.

16 What we can personally control — home, transport, food

Most of this report is about the big national machine. But here is the empowering part: the things ordinary people **directly control** add up to a huge share of the problem — and they are the feasible, doable part. Heating our homes (~27% of all UK energy) plus the cars and vans we drive (~20%) come to **roughly half of the country's entire energy use**. Add the food we buy and you have the three pillars — **home energy, personal transport, food** — that drive most of the market. Get these moving and much of the rest follows.

Pillar 1 — Home energy. Covered in detail in Sections 13–15: insulate, fit a heat pump (£7,500 grant), switch to a genuine 100% renewable electricity tariff, move to induction cooking. With ~74% of homes still on gas, this is the biggest personal *lifestyle* lever — second only to your pension (below).

Pillar 2 — Personal transport. Cars and vans are ~20% of UK energy, almost all oil. The switch is electric, and it's moving:

- Electric **cars** were ~23–24% of new sales in 2025–26 (~474,000 registered in 2025), and a growing **second-hand** market is making them far more affordable.
- Electric **vans** lag at ~9% of sales — well behind the ~24% the rules require — so this front needs a push.
- Electric **HGVs (lorries)** are further behind but starting: the government's £200m ZEHID programme is putting ~300 zero-emission HGVs on the road by early 2026, with a Plug-in Truck Grant worth up to £120,000, and electric trucks are nearing cost-parity with diesel.

"But what about the battery waste?" A fair question — and the answer is increasingly circular. Modern recycling can recover **up to 95%** of an EV battery's materials (lithium, cobalt, nickel, copper), and from 2026 UK rules require at least **65% of a battery's weight** to be recycled, rising further this decade. So the metals from old cars increasingly go straight back into new ones, cutting the need for fresh mining over time. (SMMT; Gov.uk)

The honest limit: aviation and shipping are the hard tail — no cheap clean fuel yet, and flying won't fall quickly. That isn't a personal-guilt issue; it's a research-and-industry job. Put your energy where it bites: home and road transport.

Pillar 3 — Food. Honesty matters here. Most of food's carbon (~83%) comes from how it's *produced*, not how far it travels — transport ('food miles') is only ~5–11%. So buying local doesn't slash carbon on its own. But it still matters: organic and regenerative farming use ~45% less energy than conventional, build living soil, and keep money in your community.

So the food win isn't mainly carbon — it's **resilience, quality, animal welfare and a food system we control**: choosing local, seasonal, organic and **high-welfare** produce from real farmers (Sections 13–14) over long, fragile supermarket chains. Eat well, back the growers doing it right, and you strengthen the whole system. (Our World in Data; ScienceDirect)

The comparison — two households. What's the real difference between someone who switches and someone who doesn't? Here it is, with the honest costs.

Choice	Person A (green)	Person B (fossil)	CO2 difference / yr
Home heating	Heat pump + insulation	Gas boiler	~2 tonnes
Car	EV on a green tariff	Petrol / diesel	~1.3–2 tonnes
Pension	Green / sustainable fund	Fossil-heavy default	**~19 tonnes** (on a £30k pot)
Food	Local / organic / high-welfare	Imported / supermarket	~0.3–0.8 t (small on carbon; big on resilience & quality)
Roughly			**~22–24 tonnes/yr lower**

Average UK footprint is ~10–13 tonnes per person — so **greening your pension alone can outweigh everything else you do.** The things people agonise over (the car, the odd flight) are dwarfed by where their money sits. (Make My Money Matter; Energy Saving Trust; EDF; DfT)

What it costs (the honest entry prices):

Choice	Upfront (green option)	Running cost vs fossil
Heat pump	~£2,500–£6,500 after the £7,500 grant	Similar now, falling over time
Electric car	Higher new; used EVs from ~£10–15k	~£700–£1,000/yr cheaper to run
Green electricity tariff	£0 extra (within the price cap)	Same
Green pension	£0 to switch	Comparable returns (sometimes better)
Local / organic food	Often dearer per item	Redirect a small slice; keep your treats

And the honest catch — the one you keep raising: Person A's barrier is the **upfront cost**. A heat pump and an electric car have high entry prices, even with grants. That is exactly why this report argues for **fully funding the heat-pump switch** (Section 15), a strong **second-hand EV market**, and grants that reach everyone — because the running costs and the carbon are already on the green side; it's the entry ticket stopping people. Over time, Person A spends less and pollutes far less; Person B is cheaper today and

pays for it — in money and carbon — for years.

What it means at scale — does it dent the national total?

The UK emits about **371 million tonnes of CO2e a year** (2024). One person's switch is a rounding error against that — but this was never about one person. Counting just the **direct** household savings (home + car + food, ~4 tonnes each — the pension lever is extra, market-moving power on top), here is what happens as the numbers grow:

Households making the switch	Direct CO2 saved / yr	Share of the UK's 371 Mt
1 million	~4 Mt	~1%
5 million	~20 Mt	~5%
10 million	~40 Mt	~11%
~28 million (all UK homes)	~110 Mt	**~30%**

So if all UK households made these switches, we would cut roughly **a third off the entire country's emissions — from home and transport alone**, before the pension/money lever even counts. That doesn't finish the job (industry, aviation, shipping and farming are the next fronts — for later work), but it's a hugely promising *start*, and proof that ordinary households hold a national-scale lever. (DESNZ 2024; this report's estimates)

→ **Write to your MP:** ask them to bring the upfront barriers down — fully funded heat pumps, help with EVs (new and used), and support for local food — so this stops being "feasible for the few" and becomes "feasible for everyone."

17 Tradeoffs, sacrifices & the 'austerity' question

Is the transition austerity? No — austerity is cutting spending for no return. This is **investment with a measured return** (£2.2–£4.1 per £1) that ends a recurring bill. But it must be **managed fairly**, or short-term costs land on those who can least afford them.

- **Short-term bills** can rise before the long fall to ~£1,200 by 2050 — social tariff + levy-rebalancing are the fix.
- **A just transition:** ~**211,000** offshore energy jobs are projected to be needed by 2030, and **90%+** of oil & gas workers have transferable skills — but Scotland's offshore workforce could fall ~40% (79k → 48k) if the switch is too slow. The Clean Energy Jobs Plan targets ~**860,000** clean-energy jobs by 2030, with retraining and a North Sea Jobs Service.
- **New dependencies:** imported fuel gives way to imported minerals/equipment — better (buy the kit once, not the fuel forever), but needs its own supply-chain and recycling plan.
- **The real sacrifice is delivery, not money:** political will and building fast.

18 The bottom line

We are already paying for the crisis — ~£37bn a year out of the door for imported energy, ~£140bn in excess gas costs since 2021 — for a system we don't control. The clean system costs real money to build, but it is **cheaper to run, more secure, and ours**: the annual books turn to saving ~2040, the whole bill is repaid by the early 2050s (sooner if we go faster), and then it runs a permanent surplus of ~£40bn+/yr. Most of the money is invested **inside our borders** — much of it our own pensions — building assets we own, instead of leaving the country forever. Every independent body agrees the direction. The only real questions are how fast we build and how fairly we share the cost. That part is up to us.

This is the heart of *The World Is Worth Rebuilding*: the gap between what's spent and what's needed is wide — and ordinary people, moving our money and our voices together, are how it closes.

What you can do this week

- **Move your pension** into its green/sustainable fund — the single biggest lever. Ask your provider, and ask your employer to switch the default for everyone.
- **Switch to a genuine 100% renewable electricity tariff** (covers your power — remember it won't decarbonise your gas).
- **Tackle your heat:** insulate first, then check the **£7,500 heat-pump grant** (Warm Homes Plan if you're eligible). Renting? Push your landlord.
- **Use your voice:** email your MP backing a faster grid build, more trained installers, and a fair rollout protected by a social tariff.
- **Share this report** so more people see the real picture — and the surplus on the other side.

19 Delivery scorecard — are they keeping their promises?

This is the accountability page: the government's own commitments, scored against where things actually stand as of **mid-2026**. Credit where it's due — and a clear flag on what's slipping, so we can keep the pressure where it's needed.

Commitment	Status	Where it stands (mid-2026)
Unblock planning (onshore wind, solar)	**ON TRACK**	Planning & Infrastructure Act — Royal Assent Dec 2025; onshore wind reinstated; solar on new homes from 2027.
Reform the grid connection queue	**ON TRACK**	Cut from 700GW+ to a prioritised 283GW pipeline (NESO, Dec 2025).
Stand up Great British Energy	**ON TRACK**	Capitalised £8.3bn; £300m–£1bn supply-chain fund; solar on 100 schools.
Build renewables (auctions)	**ON TRACK**	AR7 the biggest auction ever (14.7GW); renewables ~51% of power in 2024.

Commitment	Status	Where it stands (mid-2026)
Build the transmission grid (hardware)	**AT RISK**	Transformer/cable lead times 2–4 yrs; prices +75% / nearly doubled; global backlog to 2027.
Connect projects before 2030	**AT RISK**	Only ~13GW of demand connectable before 2030 — depends on the build keeping up.
Clean Power by 2030 (95% clean)	**AT RISK**	At ~51% renewables / ~74% low-carbon — on the line; hinges on grid + supply chain.
Heat pumps: 600k/yr by 2028, 450k/yr by 2030	**BEHIND**	Only ~125k in 2025 and growth slowing (56% → 27%); needs ~33% compound growth.
Heat-pump workforce	**BEHIND**	~8,650 trained installers vs ~40,000 needed — a fivefold gap.

Watch-list — where to keep the pressure:

- **Transmission hardware** — secure transformer/cable supply and UK manufacturing; this is the binding physical constraint.
- **Train installers at scale** — close the 8,650 → 40,000 heat-pump workforce gap, fast.
- **Don't dump costs unfairly on bill-payers** — some contracts (e.g. floating offshore wind) were struck above competitive prices to build supply chains; that cost shouldn't land on the poorest. Pair with a social tariff.
- **Curtailment** — we're paying wind farms to switch off while the grid catches up; building the grid faster ends that waste.

→ **Write to your MP:** every amber or red item above is something they can be pushed on. Name it, ask exactly what they are doing about it, and ask them to fully fund the heat-pump switch and speed the grid build. This page is your accountability checklist.

The honest verdict (mid-2026).
The planning fix and the grid-queue reform are real wins — credit where due. The flashing red lights are HEAT PUMPS (rollout and installers) and the PHYSICAL BUILD (grid transformers and cables). The money and the policy are largely in place; the open question is build speed and a fair share-out of the cost. That's exactly where citizens, holding politicians to their own targets, can tip it.

Quick glossary

Term	Plain meaning
Unit / kWh	A kilowatt-hour — the 'unit' you're charged for on your bill.
MWh (£/MWh)	A megawatt-hour = 1,000 units; how wholesale power is priced.

Term	Plain meaning
CfD (Contract for Difference)	A government auction that guarantees a clean generator a fixed price for ~15 years — lowers risk, so it lowers cost.
REGO	A certificate proving a unit of power came from renewables; how '100% renewable' tariffs are matched.
LCOE	Levelised cost of energy — the all-in cost to generate a unit over a plant's whole life.
Low-carbon vs renewable	'Low-carbon' includes nuclear; 'renewable' (wind, solar, hydro) does not.
Decommissioning	The cost of safely shutting down and removing old energy infrastructure (e.g. North Sea rigs).

Sources & method

- Generation mix & fuel supply: Ember; DESNZ DUKES 2025 (Ch.1, 3 & 4); RenewableUK; House of Commons Library; Statista (2024).
- Energy import bill: ONS energy trade; Energy Voice (UK energy imports >£100bn, 2022); analysis of ONS data (~£37bn net, 2024: oil ~£24.3bn + gas/coal/electricity ~£13bn). Norway gas volumes: Statista / DUKES.
- Cost of the gas crisis: ECIU (£140bn / ~£90bn extra / ~£2,000pp; households +£59bn). E3G (crisis cost > NHS England annual budget).
- North Sea decommissioning: NSTA / Oil & Gas Authority; National Audit Office. Depletion ~90%: ECIU.
- Generation costs (AR7): Carbon Brief; Energy UK — onshore wind £72/MWh, solar £65/MWh, offshore £91/MWh; new gas ~£147/MWh. Whole-system integration ~£10–12/MWh: UKERC. Gas sets the price: Carbon Brief.
- Clean Power 2030 (95% by 2030; ~£40bn/yr); grid queue 700GW→283GW, 132GW pipeline: Gov.uk Clean Power 2030 Action Plan; NESO (Dec 2025).
- Net zero economics (~£26bn/yr; net ~£4bn/yr & ~£108bn to 2050, <0.2% GDP; net saving from ~2040; ~£40bn/yr cheaper by 2050; £110bn/yr benefits; NPV £1,580bn; £2.2–£4.1 per £1): Climate Change Committee, 'Cost of net zero by 2050 less than a single fossil-fuel price shock' (Mar 2026); Carbon Brief.
- Household bill trajectory (£2,000 → ~£1,300 by 2035 → <£1,200 by 2050): National Infrastructure Commission.
- Money sources: CCC (private 65–90%); pension blueprint £1.7tn (IFM Investors); GB Energy & National Wealth Fund (Gov.uk); UK pensions ~£88bn in fossil fuels (Make My Money Matter).
- Home heating & fuel use: 2021 Census (E&W) — 73.8% mains gas, 3.5% oil; Commons Library 'Households off the gas grid' (~4m / ~15%); ~85% on fossil-fuel boilers (2024). Heat-pump grants £7,500 / £9,000: Gov.uk Boiler Upgrade Scheme.
- '100% renewable' tariffs / REGOs / green gas: Octopus Energy; Which?; MoneySavingExpert; Uswitch. Jobs / just transition: Offshore Energies UK; North Sea Transition Deal; Gov.uk Clean Energy Jobs Plan. Fairness: UKERC; Frontier Economics.
- Delivery & build capacity (Sections 12, 17): grid connections reform 700GW→283GW (NESO, Dec 2025); Planning & Infrastructure Act Royal Assent Dec 2025 & onshore wind reinstatement (Gov.uk; reNews); transformer/cable lead times & prices (IEA); heat-pump installer gap ~8,650 vs ~40,000 (Aldersgate Group; Energy UK); GB Energy £8.3bn & £300m–£1bn supply-chain fund, school/NHS solar (GB Energy; Gov.uk).
- Household transition (Sections 13–14): heat-pump sales 125,037 in 2025 & Boiler Upgrade Scheme uptake (HEM Guide; Ofgem; pv-magazine); costs by house type & solid-wall homes ~4.5m (Cucumber Eco; Retrofit Planner); Boiler Upgrade Scheme £7,500 & Warm Homes Plan up to £30,000 (Gov.uk; Ofgem); home heating shares (2021 Census).
- Personal impact (Section 16): EV car share ~23–24% of new sales 2025–26 / ~474k in 2025, vans ~9% (Zapmap; SMMT; DriveElectric); electric HGVs — ZEHID £200m, ~300 by early 2026, Plug-in Truck Grant up to £120k (Gov.uk; Fleet News); EV battery recycling recovers up to 95%, UK 65%-by-weight rule from 2026 (SMMT; Gov.uk); footprints — UK avg ~10–13 t/person, heat pump vs gas ~2 t/yr, EV vs petrol ~1.3–2 t/yr, green pension ~19 t/yr on £30k (Make My Money Matter; Energy Saving Trust; EDF;

The Finance Gap

Where the money for the transition really comes from — and where it's missing. From The Receipts & The Reality Project · v1.0, June 2026 · free to share.

1. Where the money comes from

Most of the transition is not funded by the government. The Climate Change Committee estimates that 65–90% of the investment to 2050 comes from the private sector — companies, investors and pension funds putting money into wind, solar and grid because those assets earn a long-term return. The public share never exceeds about 2% of total government spending (roughly £6–23bn a year out to 2035). The state's role is mainly to pump-prime and de-risk: Great British Energy, grid upgrades, the heat-pump grant, and price guarantees (Contracts for Difference) that give private investors the confidence to build. In short: it is mostly our own pension and private capital, invested in assets we own — not a government splurge.

2. What goes in — and what comes back, each year

- Building it: about £26bn a year on average to 2050, peaking around £33bn in 2029 (gross investment).
- Coming back: roughly £22bn a year in operating savings, because clean power is far cheaper to run than imported gas.
- Net cost: only about £4bn a year — around £108bn in total to 2050, which the CCC says is 73% lower than it estimated just a few years ago.

Britain's clean transition — per year	**£ a year**
Gross investment to build it (avg to 2050)	~£26bn
Minus operating savings (cheaper to run)	~£22bn
= Real NET cost	**~£4bn**
Versus: money already lost abroad on fossil fuels	**~£37bn**

The comparison is the whole argument: the net cost of fixing this (~£4bn a year) is a small fraction of the ~£37bn a year we already lose by not fixing it.

3. The gap — and it is political, not financial

- The build-pace gap: the government aims to roughly double clean-energy investment to £30bn+ a year by 2035, and is behind schedule. A telling sign — Great British Energy launched with £8.3bn, but £2.5bn was reallocated to nuclear, leaving £5.8bn.
- The gap that hits your front door — home heating: decarbonising heat needs on the order of £6bn a year; the government is committing only about half. The IPPR has found heat-pump funding running roughly two-thirds short of what is needed. That shortfall is exactly why the £2,500–£6,500 "heat-pump wall" exists, and why uptake stalls.

The bottom line

We are not short of money. The net national cost is a rounding error next to what we already waste on imported fossil fuels, and most of the investment is private capital seeking a return — much of it our own pensions. The real failure is that the government is fully funding the cheap, easy parts while only half-funding the one high-impact part ordinary households cannot pay for themselves: getting their homes off gas. Close that half, and the whole thing moves.

Sources: Climate Change Committee, Seventh Carbon Budget (2025); ONS energy trade (2024); IPPR analysis of clean-heat investment; HM Government / GB Energy budget statements. Information for public debate — not financial advice.

Why the Private Money Stalls

Most of the funding is private (65–90%), so the gap is not only about government spending — it is about why investors, including our own pensions, are not putting in enough, fast enough. The reasons are specific, measured and fixable. (Sits directly under "The Finance Gap".)

The shortfall

- The UK is roughly £19 billion a year short on clean-power infrastructure. The plan is to roughly double clean-energy investment to £30 billion+ a year by 2035 — so the hole is known and measured, not mysterious.

Why investors hold back

- The grid queue — the biggest blocker: clean projects wait up to 15 years to connect, and the connection queue grew tenfold in five years. Investors will not fund what cannot plug in. (Reform underway — the queue is being cut from ~700GW of stalled projects toward ~283GW.)
- Weak price signals: when the government sets the guaranteed price too low, the money does not come — a recent offshore-wind auction drew zero bids.
- Storage and grid: the network was built for centralised fossil power, not renewables; about £20 billion of battery storage is needed between 2025 and 2030.
- Pensions on the sidelines: UK pension schemes have historically invested only ~0.75% of their assets in infrastructure — far below international peers — while trillions of pounds of our savings sit in fossil fuels and shares.

The shift is starting

- The 2025 Mansion House Accord: 17 large pension providers, covering £252 billion of savings, pledged to put at least 10% of default funds into private markets by 2030, with 5% directed into UK assets — explicitly to feed infrastructure and clean energy.

The bottom line

The "missing" private money is, in large part, our own pension capital that the funds have not been investing in clean energy. Clear the grid, set fair prices, and redirect our pensions — and the stalled money flows. It is also why moving your pension to a green fund is not a gesture: it is the lever that unblocks the private capital the whole transition depends on.

Sources: Ofgem (grid connection reform); IEEFA (UK pension infrastructure allocation); City of London / Mansion House Accord 2025; CCC Seventh Carbon Budget; clean-power investment-gap analysis. Information for public debate — not financial advice.
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Solutions & Proposals

How to close the gap. The money largely exists — the task is to redirect it and remove the upfront barrier households hit. From The Receipts & The Reality Project · v1.0, June 2026 · free to share.

A. Finding the money (it already exists — redirect it)

- Fully fund the switch on rising annual quotas: each year, pay 100% of the heat-pump cost for a growing number of homes (~£2bn rising to ~£6bn/yr). Removes the upfront wall and builds installer capacity at the same time.
- Redirect fossil-fuel tax reliefs and subsidies into home heating.
- Earmark a windfall levy on oil & gas profits specifically for decarbonising homes.
- Issue low-cost green bonds ("British Renewal Bonds") to invest in assets that pay the debt back — borrowing to invest, not to spend, since the system runs a long-term surplus.
- Channel a small share of pension capital into UK clean infrastructure (via the National Wealth Fund / Great British Energy), crowding in private money rather than leaning on the Treasury.

B. Removing the barrier households hit

- Pay-as-you-save finance: a government-backed zero or low-interest loan tied to the property, repaid from the energy-bill savings — so there is no upfront cost.
- Means-tested 100% grants plus a social tariff, so low-income homes are fully funded and not priced out (instead of a flat £7,500 that favours those who can top it up).
- Drive the install price down: train installers (~8,650 today vs ~40,000 needed), use bulk and street-by-street procurement, and standardise installs to push the ~£12,500 average toward the price of a boiler.
- Rebalance policy levies off electricity onto gas and keep 0% VAT on heat pumps, so they are cheaper to run and the switch pays off faster.

Bottom line

None of this requires money we do not have. It requires deciding to point existing money — fossil-fuel subsidies, windfall profits, cheap public borrowing and our own pension capital — at the cheap, high-impact part ordinary households cannot fund alone: getting their homes off gas. Close that, and everything else follows.

These are illustrative policy proposals by The Receipts & The Reality Project, drawing on published figures cited in this report. Information for public debate — not financial advice. © 2026.

DfT); food — ~83% of food carbon is production, transport ~5–11%, organic ~45% less energy (Our World in Data; ScienceDirect); UK total emissions 371 MtCO2e (2024 provisional, DESNZ) — scaling table uses ~4t direct saving per household.

- Heat-gap & funding (Section 15): ~25m homes on gas + ~2m on oil; low uptake slowing progress (National Audit Office); heat pump typically £10–14k; BUS not means-tested, £2.7bn to 2029/30 (~£295m/yr ≈ 75k grants); Warm Homes Plan £13.2bn (£15bn with Budget) for 5m homes by 2030; ~£162bn additional investment to 2050 for low-carbon heating, ~£6.5bn/yr (CCC). The full-funding/quota costing is an illustrative policy scenario by this project, not a government plan.
- **Method note:** Tables 1–3 and 6 use published figures. Tables 4 & 5 and Figure 1 are illustrative annual/5-year profiles built by this project to honour the CCC's published averages and milestones; they are not official year-by-year or accelerated forecasts. The 'do nothing' figure assumes the 2024 net import rate (~£37bn/yr) held to 2050 — conservative, as crises push it higher.

This report compiles publicly available figures for general information and public debate. Estimates and projections carry uncertainty and are sourced above; illustrative models are labelled. Not financial, investment or legal advice. © 2026 The Receipts & The Reality Project — free to share with attribution.